NOTICE TO ATTENDEES AT MY CFSUMMIT SESSION

I realized after the session that the deck I showed was missing some info I’d meant to share. See new/changed slides 11, 13, 20, 22, 25, 27, 30-34, 36, 38-43.

Also, note very important clarification about CF Standard vs Enterprise on slide 36. Some misinterpreted my point about how only 1 thing NEW in enterprise was Enterprise-only. There DO still remain many OTHER differences. See offered link.
HIDDEN GEMS IN CF2018

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Updated Oct 2, 2018
- Major features of CF2018 (quick overview)
- Hidden gems in many areas
  - Installation, administration, web server config, monitoring
  - New/changed features, new language constructs, etc.
- As well as other topics:
  - Updates to underlying libraries’ version numbers
  - Deprecated/obsoleted features
  - What’s new in Standard vs Enterprise
  - Pricing, licensing, end of life support
  - And more
- Slides carehart.org/presentations
About Me

- Focus on CF server troubleshooting, as an independent consultant
  - Assist organizations of all sizes, experience levels
  - Work remotely 99% of the time, safe, secure, easy (via shared desktop)
  - Satisfaction guaranteed. More on rates, approach, etc at carehart.org/consulting
- Love to share info, with my clients and the community
  - Active blogger
  - Speaker at nearly every CF conference
  - Contributor to/creator of many CF community resources
    - As well as CF411.com, CF911.com, and more
How many have started using CF2018 in prod? In dev?
  - How many have at least seen resources about it?
  - Not surprised if not even many: people often wait
Anyone “waiting for first point release”?
  - Update 1 came out last month
How many likely won’t use it until next release (CF 2020)?
I do these talks, not just for those making the move now or soon
  - But also those who may see it in future 😊
Anyone know when I started doing hidden gems in CF?
  - 4.0.1 in 1999
If you may be jumping to 2018 from 11 or earlier…

- Don't miss changes and hidden gems I’d identified in those versions
- See my hidden gems talks on each: carehart.org/presentations
- I discuss also compatibility issues moving to each, as I will about 2018
While normally I’d be pointing to CF docs for more…

- At CF2018 launch Adobe offered several blog posts
  - coldfusion.adobe.com/category/coldfusion-2018/
  - coldfusion.adobe.com/tagpage/?tag=coldfusion%202018
- Sadly, doesn’t list ALL of them. See my blog listing them soon after launch:
  - carehart.org/blog/client/index.cfm/2018/7/19/whats_new_in_CF2018

Also, here at CFSummit there are several Adobe sessions on CF2018
- Of course they go into MUCH more depth on many of the topics I’ll only mention
- Hopefully some of them will be offered online, if you miss them/for those not here
MAJOR FEATURES OF CF2018

- PMT
- Auto Lockdown
- CFML language
- Security
- Performance
SOME LESS NOTED (BUT NOT HIDDEN) FEATURES

- New UI for CF Admin
- Command-line REPL
- REST Playground
- New caching engines
- Changes in CF Builder
- But then many other hidden gems
  - and some also within the “noted” and “less noted” features
  - Let’s proceed…
We’ll start with things like installation, administration, configuration
  ▶ Then development features and more
▶ First up, not so much a feature but a warning for some:
  ▶ As of CF2018 there is no longer a 32-bit installer
▶ More:
Have you seen the CF 2018 Admin? Let’s take a look
  ▶ Real hidden gem: don’t miss the offered “search” feature at the top right
  ▶ DEMO

Another Admin hidden gem:
  ▶ Scheduled tasks page finally adds “pause all” and “resume all” buttons
  ▶ CFSCSCHEDULE has been able to do that also, since CF10
    ▶ In CF2018, that no longer requires use of GROUP or MODE attributes
    ▶ But will only stop “Server” mode tasks and “application” mode tasks in same app where
      cfschedule tag is running
  ▶ More:
    ▶ helpx.adobe.com/coldfusion/cfml-reference/coldfusion-tags/tags-r-s/cfschedule.html
Some may know CF has long had a lockdown guide
  - Written by Pete Freitag and offered as part of CF docs through CF2016

CF2018 adds a new (optional) auto-lockdown tool
  - Tries to handle all at once the 84-pages of steps in the Lockdown Guide

Does offer rollback and uninstall features
  - as well as logs of what it does, if it rolls back

See [CF Home]`\`lockdown`
  - uninstall at ([CF Home]`\`lockdown`[Instance locked down]`\`Uninstall)

...
Also offers silent install option

Downloading it: adobe.com/support/coldfusion/downloads.html

More:

- helpx.adobe.com/coldfusion/using/server-lockdown.html
- coldfusion.adobe.com/2018/07/server-auto-lockdown/

One potential trap:

- Release notes for update 1 shows extra steps to take if autolockdown applied
New monitoring solution for CF2018
  - Is a very tool, really worthy of an entire talk, indeed multiple talks
  - There are many happening this week, today and tomorrow
  - Will share some tips to help you get started with it

Downloading it: adobe.com/support/coldfusion/downloads.html

Configuring it
  - Auto discovery, or manual config
    - coldfusion.adobe.com/2018/07/auto-discovery/
  - as of initial release, server auto-discovery does not support https
    - coldfusion.adobe.com/discussion/2539323/

...
Launching it: no start menu option, but instead link within CF Admin

Something you might miss: alerts
- coldfusion.adobe.com/2018/07/alerts-and-notification/

Learning more:
- and blog posts …
Several CF team blog posts

- coldfusion.adobe.com/2018/07/monitoring-coldfusion-servers/
- coldfusion.adobe.com/2018/07/database-discovery/
- coldfusion.adobe.com/2018/07/external-services/
- coldfusion.adobe.com/2018/07/code-profiler/
- And others I mention elsewhere here
Again, there were some important improvements in CF2016
  
  - Much better defaults than CF10, 11, and also enhanced config options

Still more enhancements to wsconfig UI in CF2018
  
  - Choice of expected “load levels”
  - Demo

New connector auto-tuning, within PMT
  
  - Bummer: only for IIS, it seems

More:
  
  - coldfusion.adobe.com/2018/07/connector-tuning/
  - helpx.adobe.com/coldfusion/performance-monitoring-toolset/view-list-sites-busy-connections.html
Previously CF supported ehcache
  ▶ Now adds JCS (like ehcache, implemented within jvm)
  ▶ And new options for distributed caching: Memcached, redis
See CF Admin setting
DEMO
Can also override caching features/settings at application-level
Also related new AdminAPI methods
For more:
    ▶ useful table at bottom
  ▶ helpx.adobe.com/coldfusion/developing-applications/changes-in-coldfusion/caching-enhancements.html
CF2016 had added new command-line interface (CLI)
- Allowed cmd line CFML execution by pointing to a cfm file
- Accessed using cf.bat or cf.sh in cfusion/bin folder

CF2018 adds true REPL (read-eval-print-loop)
- Essentially, able to write cfscript at command line (still via cf.bat / .sh)
  - CAN do tags using file approach above
- CF does not even need to be running
- Supports multi-line statements, either implicitly, an open "{" block, or via "^"
  - To leave multiline mode, use special statement "multilineexit"
- To exit repl: q or ctrl-c
- Use "help" command to find more

...
Can call CFCs **only in current** directory where cf.bat is running
  - can run cf.bat there, using path in front of it: \\coldfusion2016\\cfusion\bin\\cf.bat

Can output to terminal with writeoutput, writeDump, of course
  - But also, output gets auto-printed to the console when typing
    - an assignment
    - an expression evaluating to some value
    - a function
  - How to disable automatic printing of output in the console?
    - In cfusion/bin/cf.bat file, change setting PRINT_REPL_VARS_AUTO to false

For more on REPL and CLI:
On the topic of “trying out code” easily, consider Adobe’s CFFiddle
  - cffiddle.org
  - Not new or CF2018-specific, but recent update: no longer need to login
  - Can save scripts to share with others, and more

Consider also trycf.com

Let’s move on to language feature gems
Somewhat along the same lines…

The REST playground is a new way to work with CF rest services
  - Application bundled with CF, to help visualize, test, and debug them

More
  - helpx.adobe.com/coldfusion/using/rest-enhancements-coldfusion.html#restplay
Nullsupport
- helpx.adobe.com/coldfusion/developing-applications/the-cfml-programming-language/using-coldfusion-variables/data-types-developing-guide.html#null-support

Async feature
- helpx.adobe.com/coldfusion/using/asynchronous-programming.html

Enhanced support for new operator
- coldfusion.adobe.com/2018/07/enhanced-support-for-new-operator
- helpx.adobe.com/coldfusion/using/whats-new.html#new

...
- Semi-colon optional
  - coldfusion.adobe.com/2018/07/writing-cfms-without-semicolons/
  - helpx.adobe.com/coldfusion/using/whats-new.html#Otherchanges

- Closures in tags (previously only in script)

- Named parameters

- ...
New control of query auto-generation of primary keys

- cfquery attribute disableAutoGenKeys
- queryexecute
  - Added the value disableAutoGenKeys in queryOptions struct

Cfchart

- Adds support for responsive client-side charts
- Can specify the height and width in percentages

And still more groups of changes …
Typed arrays
Array negative indexes
Array slices
Member functions now supported for string literals
More:
NEW CFML FUNCTIONS

- ArrayFirst
- ArrayLast
- QueryDeleteColumn
- QueryDeleteRow
- CacheGetEngineProperties
- RunAsync
- StructIsOrdered
- More:
NEW MEMBER FUNCTIONS

Too many to list, but in categories of:

- query functions
- array functions
- xml functions
- async functions
- numeric functions
- date functions
- as well as changes to some existing member functions

- helpx.adobe.com/coldfusion/developing-applications/building-blocks-of-coldfusion-applications/using-the-member-functions.html
Abstract CFCs & Methods
Subtyping/covariant method return types
Final variables, methods, components
More:
  coldfusion.adobe.com/2018/07/oop-and-coldfusion/
default functions in interface
coldfusion.adobe.com/2018/07/default-function-in-interface/
We’re more than half-way home. But areas remaining include…

- Deprecated features
- Updates to underlying libraries’ versions numbers
- What’s new in Standard vs Enterprise
- Pricing
- Updates since initial release
- And more!
See:

- helpx.adobe.com/coldfusion/deprecated-features.html

Some features listed as deprecated (there, but should not be used)
- Mostly things rarely used by most anymore

New concept: "retired" (feature **not enabled by default**)
- Some may be things rarely used by most (flash remoting, flash forms, etc.)
- Some you may use: UI tags (more on that in a moment)

Potential trap
- That page says only the thing removed in CF2018 is CF Server Monitor
- I ran into some other issues...
The pages list some things as deprecated that seem obsoleted (code fails)

- cfschedule’s timeout attribute (used in creating a new task)
  - can add cfsetting requesttimeout to page being called (if under your control)
- cfcache’s cachedirectory and timeout attributes

Also, though not listed on the page, I found:

- cfqueryparam failed if..
  - cfsqltype="CF_SQL_int" (should instead be “CF_SQL_integer”)
  - cfsqltype=""CF_SQL_DateTime" (should be CF_SQL_date, time, or timestamp)
- cfssocialplugin failed if width attribute specified
Among things listed as “retired” are UI tags based on YUI javascript library
- So these will not work out of the box with 2018, but you can “enable” them
- This was also true as of one of the updates to CF2016 and 11 last year

Includes these tags
- cfmenu, cftree, cftooltip, cfcalendar, cfinput (autosuggest attribute), cfinput (sourcefortooltip attribute), cfsprydataset

To re-enable these, just copy needed YUI library files back into CF
- See bottom of that deprecated features page
OTHER GOTCHAS

- Watch out: as part of the new OO support, CF now has an **abstract** keyword
  - As such, if you have code that uses that word, you will have a conflict/errors
  - Even if you may not think you use that, watch out that frameworks might
    - ColdSpring does
  - You need to carefully find and replace variable names, properties called “abstract”
    - May not want to do global replace, as you may have text that shouldn’t be replaced
    - Could just run through code and fix those which get errors, but that’s risky, too
Antisamy 1.5.7 (OWASP security library)
Derby 10.11 (embedded DB)
Ehcache 2.10.3 (caching library)
Esapi 2.1.0 (OWASP Enterprise Security API)
Hibernate 5.2.11 (ORM library)
HttpClient 4.5.2 (underlies CFHTTP and more)
Java 10.0.1 (the JVM which underlies CF)

jQuery 3.1.1 and jQuery UI 1.12.1 (JS library which underlies various UI tags and Admin interface features)
Lucene 6.6 (underlies Solr search engine in CF)
POI 3.7 (underlies MS Office Integration features)
Solr 7.2.1 (the embedded search engine, used by CFSEARCH/CFINDEX, etc.)
Tomcat 9.0.10 (app server underlying CF, when deployed in traditional "Server" configuration)
Only thing new that is Enterprise only is distributed caching
  - redis and memcached options
  - Standard does support long-standing ehcache and the new jcs option
The CF2018 perf. whitepaper says “web server path caching” is Ent-only
  - But it’s not a new feature (has been there for many releases)
  - And I see the option in the CF2018 Admin Caching page

LET ME BE CLEAR: I am NOT saying that’s the ONLY difference between CF2018 Standard and Enterprise
  - I’m saying that’s the only thing NEW in 2018 that is Enterprise-only
For more on differences between CF Std and Ent:
  - adobe.com/products/coldfusion-standard/buying-guide.html
And now, the shoe drops. The price of CF2018 has increased
  - Standard: 2499 (per 2 CPU cores)
  - Enterprise 9499 (per 8 CPU cores)
Upgrade discount for those on CF2016 (none for those on CF11 or earlier)
Consider buying CF from resellers, for still more discounts
  - Buy-adobe-software.com (from makers of FusionReactor)
> No real difference from CF2016
> More:
• Release notes (bug fixes, known issues, etc.)

• Performance Whitepaper
- Released last month
- Tomcat updated to 9.0.10
- New GetCanonicalPath function
  - Was also added to CF2016 and 11 per their updates released at the same time
- Potential traps...
Potential trap:

- Update adds `packetsize` to server.xml for the `ajp` and `http "connector"` xml elements
- Someone complained they had already added that, and the update just added it again, making it a dupe and this preventing thus CF coming up!
  - And the server.xml file did NOT get backed up in the hf-updates folder
- Remember also potential trap if autolockdown is applied mentioned before

More:

Lists of updates, links to technotes, and offers jar download links!
  - helpx.adobe.com/coldfusion/kb/coldfusion-2018-updates.html

Also available for CF 2018, 11 and 10:
  - helpx.adobe.com/coldfusion/kb/coldfusion-2016-updates.html
  - helpx.adobe.com/coldfusion/kb/coldfusion-11-updates.html
  - helpx.adobe.com/coldfusion/kb/coldfusion-10-updates.html

Again, updates are cumulative, need only apply latest!

And finally…
Some may know that Adobe released Docker images for CF2016
- They have been updated for CF2018
- And it’s also been updated already for Update 1

bintray.com/eaps/coldfusion/cf%3Acoldfusion/2018.0.1/view/readmore#release
- Built-in FTP support
  - Window>Show View>Other>Remote Systems
  - in previous releases, you’d have to know to get it, Remote Systems Explorer
  - helpx.adobe.com/coldfusion/using-coldfusion-builder/managing-servers.html#remote
- Asserted to load large files faster, and use less memory
- Support to import code profiler data from PMT
  - helpx.adobe.com/coldfusion/using-coldfusion-builder/managing-projects.html#profiler
- ...
Cordova replaces Phonegap
  • helpx.adobe.com/coldfusion/mobile-application-development/packaging-mobile-applications.html

Standalone edition now built upon Eclipse Oxygen 4.7.2

More:
So, lots of changes, right? (Too many to easily count)

Hope you may be more motivated—and informed—to consider CF2018
  ▶ To understand if and how it may work for you
  ▶ Or at least where things stand regarding it as of now

Again, my contact info for followup:
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